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मानक

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IS 8008-2 (2003): Injection Moulded/Machined High Density Polyethylene (HDPE) Fittings for Potable Water Supplies, Part 2: Specific Requirements for 90° Bends [CED 50: Plastic Piping System]



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भारतीय मानक
पेयजल पूर्ति के लिए अन्तःक्षेपण संचकित
एच डी पी ई फिटिंगें—विशिष्ट

भाग 2 90 डिग्री बेंड की विशिष्ट अपेक्षाएँ
(पहला पुनरीक्षण)

Indian Standard

INJECTION MOULDED/MACHINED HIGH DENSITY
POLYETHYLENE (HDPE) FITTINGS FOR POTABLE
WATER SUPPLIES — SPECIFICATION

PART 2 SPECIFIC REQUIREMENTS FOR 90° BEND

(First Revision)

ICS 83.140.30;91.140.60

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BUREAU OF INDIAN STANDARDS
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FOREWORD

This Indian Standard (Part 2) (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Plastic Piping System Sectional Committee had been approved by the Civil Engineering Division Council.

This standard covers general requirements for injection moulded/machined HDPE fittings which are used for connection by welding process to HDPE pipes covered by IS 4984 :1995 'High density polyethylene pipe for water supply (*fourth revision*)'.

This standard was first published in 1976. Keeping in view the developments in this field and considering revision of IS 4984 this standard has been revised.

The requirements of injection moulded/machined HDPE fittings are covered in nine parts. The other parts in this series are:

- (Part 1) : 2003 General requirements for fittings
- (Part 3) : 2003 Specific requirements for 90° tees
- (Part 4) : 2003 Specific requirements for reducers
- (Part 5) : 2003 Specific requirements for ferrule reducers
- (Part 6) : 2003 Specific requirements for pipe ends
- (Part 7) : 2003 Specific requirements for sandwich flanges
- (Part 8) : 2003 Specific requirements for reducing tees
- (Part 9) : 2003 Specific requirements for end caps

All revised parts have been aligned with IS 4984 with respect to grade of material, dimensional requirements, testing procedures and sampling methodology.

Provisions has been made for rewelding, in case any weld gets rejected. Weld length had been kept constant with a uniform tolerance.

Drawings have been revised from short neck pipe ends to long neck pipe ends. The range of diameter of fittings, weld length and clarity of the dimensions in the drawings had been incorporated in each part of the standard, wherever applicable.

This standard covers general requirements for materials, manufacture, dimensional, etc, for 90° bend.

Fittings from 20 mm to 315 mm are manufactured by the injection moulding methods and machined, wherever so required and fittings of 355 mm and above shall be manufactured by machining process from thick walled extruded pipes or compression moulded slabs.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

INJECTION MOULDED/MACHINED HIGH DENSITY POLYETHYLENE (HDPE) FITTINGS FOR POTABLE WATER SUPPLIES — SPECIFICATION

PART 2 SPECIFIC REQUIREMENTS FOR 90° BEND

(First Revision)

1 SCOPE

This standard (Part 2) covers the specific requirements for materials, manufacture, dimensional and tolerances and marking for injection moulded and machined HDPE 90° bends for potable water supplies.

2 REFERENCE

The following standard contains provisions which, through reference in this text, constitutes provisions of this standard. At the time of publication the editions indicated was valid. All standards are subject to revision and parties to agreements based on this standard is encouraged to investigate the possibility of applying the most recent edition of the standard indicated below:

<i>IS No.</i>	<i>Title</i>
8008 (Part 1) : 2003	Injection moulded/machined high density polyethylene (HDPE) fittings for potable water supplies Specification: Part 1 General requirements for fittings

3 REQUIREMENTS

3.1 General

The general requirements for material, manufacture, grade, sizes, performance requirements, methods of test sampling and inspection shall conform to IS 8008 (Part 1). 90° bends from 20 mm to 160 mm shall be manufactured by the injection moulding methods and machined wherever so required.

3.2 Manufacture

3.2.1 A typical illustration of injection moulded 90° bend is shown in Fig. 1.

3.2.2 Laying Length

The overall laying length and tolerances thereon shall comply with those given in Table 1 read with Fig 1.

3.2.3 The outside diameters and wall thickness of fitting at ends shall comply with requirements given in 8 of IS 8008 (Part 1).

4 MARKING

4.1 Each 90° bend fitting shall be clearly marked at a prominent place, with the following information:

- Identification of source of manufacture, and
- The size of the fittings, grade of material and appropriate class (working pressure) to which the pressure rating of the fitting corresponds.

4.2 BIS Certification Marking

Each 90° bend fitting may also be marked with the Standard Mark.

4.2.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which a licence for the use of the Standard Mark may be granted to the manufacturers or the producers may be obtained from the Bureau of Indian Standards.

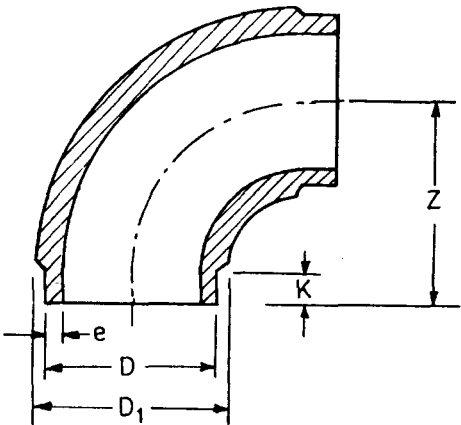


FIG. 1 90° BEND

Table 1 Dimensions for 90° Bends
(Clause 3.2.2)

All dimensions in millimetres.

Sl No.	Nominal Diameter	Diameter for Manufacturing Reference	Welding Length	Laying Length
(1)	D	D ₁	K	Z
i)	20	27	15	35 ± 1
ii)	25	29	15	40 ± 2
iii)	32	36.5	15	50 ± 2
iv)	40	46.5	15	60 ± 2
v)	50	57	15	70 ± 2
vi)	63	70.5	15	80 ± 2
vii)	75	85	15	90 ± 2
viii)	90	98	15	110 ± 2
ix)	110	122	15	140 ± 3
x)	125	135	15	140 ± 3
xi)	140	150	15	150 ± 3
xii)	160	170	15	170 ± 3

NOTE —Tolerance on various dimensions are given below:

Dimension	Tolerances
Diameter for manufacturing reference, D ₁	± 2 mm
Welding length, K	± 3 mm

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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